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ABSTRACT

The purpose of this essay is to discuss some of the practical aspects of getting systems analysis done as a way of getting decisions made; this can complement the formal methods of optimization devised for idealized decision making situations. The emphasis here is on State and Local governments. The use of PPBS at the State and Local levels is growing but not as rapidly as at the Federal level. The first task for an analyst is to understand how decisions are actually made in his government. This means that one must understand very clearly how decisions are actually being made before one sets out to do an analysis. The discussion concentrated mainly on service organizations within government, however, the same logic applies to services to segments of the public except that the identification of target groups of intended beneficiaries is a very important consideration here. These notes were intended mainly for those concerned with the potential applications of systems approaches in State and Local government. The comments are not meant to be exhaustive or definitive. (NH)

# Application of PPB on State and Local Levels

by

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Paper presented at an Institute on Program Planning and Budgeting Systems for Libraries at Wayne State University, Detroit, Michigan, Department of Library Science, Spring 1968

# Introduction

by
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The following paper was presented at an institute on Program Planning and Budgeting Systems for Libraries, held at Wayne State University under the Higher Education Act, Title IIB, in the spring of 1968.

The intent of the institute was to introduce administrators and finance officers of large libraries, public, state, and academic to the principles and procedures of PPBS.

Each participant in the institute brought with him the most recent budget document from his own library, and with the help of the institute staff, attempted to convert it into a PPBS presentation.

# Application of PPB on State and Local Levels

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The purpose of this essay is to discuss some of the practical aspects of getting systems analyses done as a way of getting decisions made; this can complement the formal methods of optimization devised for an idealized decisionmaking situation. The emphasis in this note will be on State and Local governments. The use of analysis is rapidly increasing and there is quite a wide variety of governmental applications. At the Federal level the mandatory introduction of the Planning, Programming, Budgeting System (PPBS) has had a very noticeable affect in furthering planning as well as the use of systems analysis and benefit-cost analysis. At the State and Local levels use of PPBS and other forms of planning is also growing but not as rapidly. The nature of many of the allocation problems is different at the local level, the magnitude of the amounts is certainly different, and the propensity to change is not quite the same. One of the mechanisms for encouraging the use of analysis has been the State and Local Finances Project of the George Washington University, carried out with the sponsorship of the Ford Foundation and of the Bureau of the Budget, in which 5 states, 5 counties and 5 municipalities participated. These 15 jurisdictions undertook the development, introduction and use of the PPBS approach and have reported on their diverse experiences with it. Common to most of these were some difficulties with analysis, without which the best PPB system is not very useful.

I would like to make sure that the distinction between the structural aspect of PPBS and the analytical aspects is clearly understood because this note will not discuss how one sets up a program structure, or how one devises ways of crosswalking between programs and appropriations; these are structural aspects of PPBS. This note is concerned only with the subject of analysis to address issues and problems that become apparent in the process of developing and using a PPB system because one has found it necessary to examine objectives and alternative ways of obtaining them or, in a more general sense, to figure out how one specifies and relates inputs and outputs.

In getting analyses done and in getting them connected to the decisionmaking mechnaism there have been - and continue to be - difficulties in getting the very idea of analysis and alternatives accepted. Neither the economic theory of the firm nor the formal methods of operations research address these matters; that is the reason for my topic and its title. There are, however, many excellent discussions and models of aspects of this subject, e.g., by Down, Tullock, Olson, Wildawsky and Williams.

Because analysis is only a means and not an end, it has to be relevant to the decisionmaking mechanisms. The first task for the analyst - and by analyst I mean any individual who finds himself in the position of having to do analysis - is to understand how decisions are actually made in his government. This neither means that one has to like what one discovers nor that there may not be a better way of making decisions. It does mean, however, that one must understand very clearly how decisions are actually being made before one sets out to do an analysis. The analyst should be clear in his mind whether the analysis should fit the existing system or

whether the decisionmaking system itself (especially if it does not look like an orderly system) will be included in the analysis. When that is done, and a "better" way of making decisions is explicitly identified in the analysis, some unexpected results may occur. What seemed like a perfectly reasonable subject for analysis to the analyst may be interpreted as the target of an attack on the system by the system itself, and it may feel that way even if intent and message were not hostile. Making the system part of the analysis means entering the domain of politics. Everybody knows that decisions are not made solely on the basis of analyses, and that the Decisionmaker out of the textbook is about as rare a species as Economic Man. Therefore, the analyst had best get his political and institutional facts straight before he starts.

What kind of analysis should he do? Frequently it is called, "issue analysis". This term has been coined independently by several people who have worked on civil applications of the kind of systems analysis that was developed to such a high level in the military area. It soon became evident that the step in analysis which military systems analysts had called simply, "defining the problem", began to assume a rather different implication in the setting of State and Local governments. There, "defining the problem" had a different meaning than it had where operations research got its start and where systems analysis became an accepted way of looking at research allocation problems. This has several causes. An important factor is institutional and will be discussed later. I mentioned earlier the differences in the scale of problems and the rate of change. Another reason is that few administrators had the background -whether through formal education

or experience-- and the orientation that makes them intuitively attuned to the kind of analysis that is bound to be challenging the status quo, that is bound to consider alternatives to the established way of doing things, and that is in most cases going to raise explicit or implicit questions about why they are doing what they are doing. That is just not the outlook of the traditional administrator, but this is changing and in many jurisdictions there are very progressive administrators who ask for analysis and really mean it. I have gathered from conversations with a number of practitioners and users that many are confronted with administrative systems which are likely to view analysis in a way that may make it questionable whether it would be wise to proceed with sophisticated or elegant techniques. It may must not be appropriate from the simple politics of a situation: sometimes it does not pay to show someone else up. Selecting the level of sophistication of the work with which one is, in effect, communicating with either one's one superiors or with an agency that has superior powers is an interesting - and practical - problem in administrative or bureaucratic psychology. The merits of the individual situation and the psychology of the individuals concerned have to be judged. There are instances where it is clearly to on'e advantage to demonstrate a very high level of technical competence. The same high level of technical competence may, however, be totally misconstrued by a recipient who feels defensive about it because he himself is not as technically competent as the individual and, by extension, the agency that did the work. So here is another reason why a bit of political and psychological sleuthing is indicated before one goes about the business of actually doing an analysis.

I mention these considerations because analysts are properly concerned about resources which are by definition always scarce and have opportunity value. If it isn't money, it is certainly time: time spend on analysis is time not available to accomplish something else. It is not productive to spend a lot of time, money, or both on an analysis which is just not properly tuned in to the way the decisions are being made and the way the results are going to be read. The cost of a cost-effectiveness analysis often lies between one percent and one-tenth of one percent of the amount at issue in the decision problem. This is certainly not a hard and fast rule regarding the cost of information for decisionmaking but that is approximately the range for studies and analyses, provided the effort is managed carefully because it certainly is easy to spend a lot more. I use a few very simple guidelines - which I violate when appropriate - and offer them for your consideration. Conceptual correctness, completeness and timeliness are usually much more important than detail. Using more than three significant digits rarely adds to the value of the information but increases work and chances of error. I try to judge where marginal gains will be too small to be worth pursuing, and I try to remember Parkinson's Law: "Work expands to to fill all available time".

We talked about issue analysis, also called "defining the problem". It is a "pencil-and-paper-exercise". That means that you do not need a computer. The purposes of an Issue Analysis are to state in as clear and concise a manner as one is capable of doing, what is at issue (hence the name "issue analysis"), what the problem seems to be, what we are trying to achieve, what the goals are towards which we are striving, what the objectives are

which we are assuming, by what alternative means do we think they can be obtained, what resources are required, how we measure the, in what dimensions we think the output or the effectiveness ought to be measurable (if we can measure it - so much the better) and by what criterion, that is, by what relation between input and output, we are proposing to choose the preferred alternative. These are, of course, all the standard ingredients of a systems analysis and the logical, consistent relations serve as the model.

I think it is also helpful to recognize that an analysis is really only a strawman. It is a vehicle for involving others whose views need broadening, who need to recognize that the status quo is only one alternative, not the only one. Therefore, objectives - and alternatives to attain them - developed by the analyst are likely to change, and I would really be concerned if they did not! That implies, of course, that one should not start with the intention of producing a definitive piece of work, and that the analyst's version of author's pride - "you can't change my beautiful objectives!" - is quite out of place.

An additional aspect of issue analysis which is quite important is to describe the status quo: what is the situation and its setting now. Because by definition all decision problems in planning deal with change (in some cases the change is zero -- don't do anything" it is useful to set down in a simple narrative: this is where we are, this is the change that we are discussing and this is how it fits in with the next higher level of concern to the decisionmaking hierarchy. This show a system of which one's own domain is a sub-system. The measures which describe output should be designed

in such a way that they are compatible with considerations at the next higher level of decisionmaking because there they are inputs. If this is not done, the exercise will probably be useful only as an internal document. This distinguishes systems analysis and issue analysis from the analysis of the internal efficiency of an operation. Put very simply, questions dealing with effectiveness mean: what are we trying to do and how well are we doing it; questions of efficiency typically mean: given that we know what to do and how to do it, how do we do it most cheaply; or, given that we have these resources, how do we get the most out of them. For questions of the efficiency of know ways of achieving know objectives, the industrial engineering and operations research approaches are very useful, but this is not what systems analysis is mainly about. It is intended to deal with questions of purpose, objectives, goals and effectiveness and is concerned with finding alternative ways to obtain what we are trying to achieve.

As stated above, the issue paper should deal with the institutional setting. This means describing the existing organizational and decision-making mechanisms in such a way that it is clearly evident who and what has to be considered in order to evaluate the alternatives in a light which illuminates those very important factors. In analysis dealing with services, for example, the output of libraries and other information sources, it is important, I feel, to identify the user, beneficiary or target group quite carefully and that the analysis describe the nature of the service in such a manner that it is responsive to the domain of that user. I personally think that one of the least desirable ways of going about analysis of services is to assume that the user should want the service because the offerer

knows best what is good for him. This is not likely to result in a productive dialogue and is poor analysis. It is worth the trouble to show that one understands what the recipient or user does, what decisions he has to make, what his work looks like and how the services to be provided will fit into his scheme of thing. There are very practical reasons for doing the issue analysis in this way because it permits the definition of objectives and effectiveness measures in a realistic manner. By "realistic" I mean that attainment should be expressed in terms which are controllable by the organization providing the output, and not in terms of the effectiveness of the organization to which this is but one of several inputs. For example, to postulate an objective of better decisionmaking by the mayor, for an information service organization which furnishes inputs to the mayor for an information service organization which furnishes inputs to the mayor on request, is illogical because that objective is neither attainable nor measurable by the service organization. There is nothing wrong with including a goal or point-of-reference statement in the formulation of the objective, e.g., "in order to assist the chief executive in his efforts toward more effective and efficient government, the objective of the information service function shall be to provide the following information": and + then specifying types of information to be furnished, e.g., recurring and on call, the macimum amount, maximum response time and, perhaps, some measure of accuracy based on the criterion of relevance. Such measures can be related to the resources required to produce the outputs, and to performance budgets and performance measurement.

The discussion has concentrated mainly on service organizations within

government. The same logic applies, of course, to services to segments of the public except that the identification of target groups of intended beneficiaries is a very important consideration here. For one, indicators of benefits intended to be of social, not just economic, value tell a much better story when the target groups are identified in considerable detail. Again, there are good practical, political reasons for this. Services provided by governments usually have the potential of redistributing income. Because those who pay and those who benefit are not necessarily the same, it helps political decisionmakers if the alternatives are expressed in terms that make an assessment on that basis easier.

A more detailed discussion of redistribution is clearly beyond the scope of this short note, and the incidence of benefits and costs is a favorite subject of books and papers in Public Finance.

These notes were intended mainly for those who are concerned with the potential applications of systems approaches in State and Local government. My comments were not meant to be exhaustive or definitive. If they will stimulate critical comments they will have served their purpose.